L. COLEOPTERA, X: HYDROPHILIDAE.

By A. D'ORCHYMONT.

Dr. Kemp's collection of Hydrophilidae from the Abor country and the frontiers of Assam comprises 47 specimens and a dozen species, of which three are new to science. The determination of some of these has been attended with great difficulties, especially in the case of *Amphiops mirabilis* Sharp, which was first thought to be the same as Illiger's *Hydrophilus gibbus*. Some of the specimens under examination were sent in 1914 to Mr. Kolbe, Director of the Berlin Museum, for comparison with the unique type of that beetle, described in 1801. Owing to the war I have, however, only recently succeeded in obtaining the opinion of that entomologist.

Hydraena (s. str.) **dimorpha**, sp. nov.

H. oblongo-ovalis, parum convexa, supra sordide brunnea, palpis tarsisque pallidioribus, pronoto anteriore et posteriore, elytrorum marginibus rufescentibus; capite rugose punctato; pronoto rectangulato, longitudine latiore, antice attenuato, post medium sat abrupte excisis, margine anteriore sat profunde excisis vel sinuatis, lateribus pertenuissime crenulatis; elytris separatim rotundatis, angulis suturalibus dentatis, dense punctato-seriatis, punctis approximatis et quadratis, intervallis planis, margine (praeter ad apicem) leviter depresso. ♂: palporum maxillaribus articulis secundo tertioque (2° praecipue) ad apicem incrassatis et infuscatis, 4° interne obscure angulato.

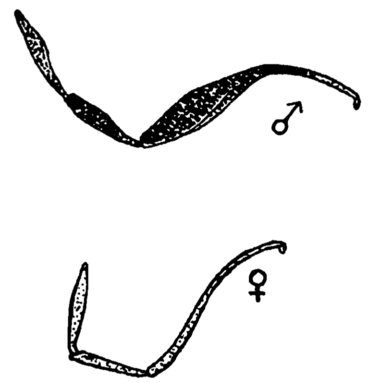
Type: Indian Museum, No. 2546/19, ♂, 1·5 mm., Dibrugarh, N.-E. Assam, Abor Expedition, 17–19·xi·1911 (*Kemp*). Found in small tanks.

The insect for which this name is proposed is in a decayed condition, which did not enable me to examine the underside; but I have no doubt of its being a male, on account of its thickened maxillary palpi.

Head not very distinctly punctured, of a rugulose and obscure sculpture, nearly black. Labrum deeply excised anteriorly, the two lobes slightly curled up in front. Maxillary palpi long, second joint very long and curved, third very much shorter (less than half), last joint a little longer than the third, acuminate.

Pronotum testaceous with a transverse blackened band in the middle going nearly from side to side, less attenuated before than behind, the sides without angulation, only rounded in the middle, but emarginate just before the nearly rectangular angles. Sides microscopically serrate. Punctuation very coarse even on the

sides. Lateral foveae conspicuous and joined together by a longitudinal impression. Anterior and especially posterior transverse impressions nearly effaced.



TEXT-FIG. 1.—*Hydraena dimorpha*, sp. nov. Maxillary palpi.

Elytra elongate with numerous coarse series of nearly quadrate punctures and an intercalate short sutural series, the series still indicated on the apex, intervals very narrow and not carinate; pubescence very short; sides explanate and lighter in colour, the apex separately rounded with the sutural angle produced to a microscopic tooth.

Male (fig. 1) with the second joint of the maxillary palpi very incrassate and infuscate on its second half, third joint also thickened towards the apex but to a lesser degree, last joint faintly angulate beyond middle on the inner side; the anterior border of the pronotum seems also more deeply emarginate in the male.

I have seen a cotype (♀) of this new species, No. 2990/19, from the same locality, taken on the same date also by Dr. Kemp. This form is very distinct from my newly described *H. indica* and from G. C. Champion's *H. bihamata*, *cirrata* and *maculicollis*, also from India.

Hydrochus annamita, Régimbart.

Eight specimens from Dibrugarh, N.-E. Assam, 17–19·xi·1911, in small tanks (Nos. 2547/19 and 2549/19), have been so labelled on comparison with Régimbart's description. According to this author the species is somewhat variable; in the beetles before me the punctures of the elytra appear to be less polyhedric and the interspaces less narrow, as noticed in the typical specimens from Annam.

Hydrochus ? binodosus, Motschulsky.

On account of the general form and of the hind tubercle on the 5th interspace, I should refer to this name one specimen (No. 2548/19) captured in small tanks at Dibrugarh, N.-E. Assam, Abor Expedition, 17–19·xi·1911 (*Kemp*). But the femora are of a light colour, infuscated on the knees, instead of "presque noires," as Motschulsky says of his species. Motschulsky's forms (*violaceomicans*, *opacus* and *binodosus*) are from the "East Indies" without other indication; no author has met with them since the time they were too briefly described in 1860 and they are therefore insufficiently known. As to the two first species (*H. violaceomicans* and *opacus*) they must be closely allied, if not identical, with Nietner's *H. lacustris* of 1897. Judging from the description, the same may be said of Fairmaire's *latitans* (1888) from Tonkin.

Coelostoma stultum, Walker.

One specimen (No. 4145/19) measuring $4\frac{1}{2} \times 2\frac{3}{4}$ mm. from Dibrugarh, N.-E. Assam, 17–19·xi·1911 (*Kemp*), differs from the normal *C. stultum* from India, Indo-China, Java and Borneo, in the punctuation of the upper surface being finer and less dense and in the femora and epipleura being rather black and not as usual of a very obscure red. The ventral segments are conspicuously red-spotted on the sides. Otherwise it has the narrow scutellum and long tarsi of *C. stultum* and the first joint of the intermediate tarsi is also much more elongate than the second. It is perhaps a slight variety of that wide-spread species.

Coelostoma horni, Régimbart.

Under stones on the bank of the Dihang River, Janakmukh, 17·xii·1911 (600 feet), one specimen was found (No. 4152/19) with the sides of the elytra more coarsely punctured than is usually the case in individuals examined from Ceylon.

I have ascertained myself by comparison with the type in the Paris Museum that the species is a good one, at least not the same as *C. orbiculare* F. It belongs to an aberrant and hitherto unnoticed series, of which there are more, with the intermediate femora very densely and closely clothed beneath with silky hairs (not disjoined setae and brilliant interspaces as in *C. orbiculare*), first ventral segment carinate and prosternal process toothed anteriorly. The claws of the tarsi have a tooth-like process on the base. Neither of these important characters were noted in the original description, the specimen having apparently not been examined from the ventral side, as it was glued to cardboard. Otherwise, and superficially, *C. horni* is very like *C. stultum*, but smaller, having also the maxillary palpi of a clear yellow colour.

Dactylosternum hydrophiloides, MacLeay.

Dr. Kemp has obtained a good series of this pretty common Indo-Malayan species at Rotung (1400 feet), 28·xii·1911, under bark (Nos. 2592–2605/19), and one example (No. 2606/19) at Sadiya, N.-E. Assam, 27·xi·1911, under a dead plantain tree.

Paromicrus annandalei, d'Orchymont.

Ann. Soc. Ent. Fr. LXXXVIII, p. 130 (1919).

Oblongo-ovalis, postice sat angustatus, sat convexus, nitidus, rubro-ferrugineus, haud infuscatus; capite prothoraceque sat dense perminutissime punctulatis, hoc lateribus vix et angustissime explanatis; elytris postice stria suturali tenui munitis, lateribus undique angustissime explanatis, decem-seriatim punctatis, seriebus posterioribus parum impressis, intervallis fere planis, secundo primo tertioque haud latiore, intervallo quoque serie punctulorum minutorum munito; mesostiti parte elevata aream rhomboidalem, elevatione longitudinali tectiformi instructam, formante.

Type: Indian Museum, No. 3273/19, 1 × 0·7 mm., Rotung, Abor Expedition, 26·xii·1911, 1400 feet (*de Courcy*), unique.

This species, the very smallest known, was included by me in the table of the genus I published in 1919. It is of a reddish ferrugineous colour and can be distinguished from all the forms described, not only by the very small size, but also by the mesosternal process being longitudinally and highly tectiform throughout its whole length. The elytra are narrowly laminate and dilated on their sides, also the sides of the pronotum, the lamination being here, however, still more narrow. The 10 elytral series of tolerably coarse punctures are not impressed, the inner one being only a trifle deeper towards the apex, near the very shortened sutural stria or rather sutural impression. The punctuation of the interstices is nearly as coarse as the principal one, forming a single row on each interstice (secundar series).

Form oblong-oval, narrowed behind and moderately convex. The head and pronotum are devoid of the transversely impressed scratches found in other species and the interstices between the very microscopic punctures are shining (69 diameters).

Helochares (Hydrobaticus) lentus, Sharp.

One specimen of this common species was met with by Dr. Kemp in small tanks at Dibrugarh, N.-E. Assam, 17–19·xi·1911 (No. 4141/19).

A second individual of smaller size and with the punctuation of the pronotum coarser and more densely distributed seems to belong to a variety of it. A similar specimen in my collection (Cochinchine) has been seen by Régimbart and named by him *H. lentus* var?

Helochares (s. str.) **kempi**, sp. nov.

Parvissimus, subdepressus, obscure niger, limbo elytrorum anguste prothoracisque aliquantum latius rufo, capite utrinque ante oculos translucide ac rufescenter maculato; palpis mediocribus cumque genibus, tibiis et tarsis rufis; palporum maxillaris ultimo articulo penultimo aliquantum longioribus; supra subtiliter punctatus. Elytra sine striae. Mentum evidenter excavatum. Subtus niger; segmenti ultimi marginis posterioris perparvule excisis.

Type: Indian Museum, No. 4148/19, 2 mm., Yembung, Abor Expedition, 1100 feet, 19·i·1912 (*Kemp*).

Three specimens of this very interesting species were secured at Yembung, on the banks of a stream, under stones. It is the smallest insect of the genus, having the appearance of a *Limnebius*, readily distinguished by the deep black colour, much polished surface, lack of striae and of mesosternal carina and also by the very minute and ciliated notch on the extremity of the 5th ventral segment. The last joint of the maxillary palpi is, however, a little longer than the preceding one, this character being generally the

opposite in the genus *Helochares.* I believe this species to be not closely allied to any other of the group.

Head with closer and deeper punctuation than on the pronotum, distinct impressed antenno-frontal and backwards disappearing sagittal sutures. Gular sutures broadly separated. Prefrons red on each side, with slightly emarginate and microscopically striolate anterior margin, a group of a few coarser antero-external systematic punctures and any dispersed intraocular ones along the antenno-frontal suture. Labrum very broadly transverse, slightly emarginate, with microscopically striolate surface and very irregularly placed punctures. First joint of antennae not very long, 2nd pyriform, a little shorter, 3rd to 5th becoming regularly broader, 4th very small, 6th subhemispherical, supporting the three-jointed pubescent club, 7th and 8th of equal size, 9th ovoid and much larger. Maxillary palpi of moderate length, a little longer than the antennae, not darkened at the apex, length of joints in the proportion of 1/12, 1, 9/12, 10/12; 2nd joint thickened on the apex, straight on the anterior, convex on the posterior margin, 3rd obconic, 4th thickened in the middle, cut off at the apex and slightly longer than the preceding one. Mentum polished, with dispersed and irregularly disposed punctures, much excavated in front.

Pronotum of a deep black colour, with both sides red-margined, anterior angles rounded, posterior more angular. Antero-external systematic series of coarser punctures placed near the anterior margin, straightened obliquely to the anterior angle and then abruptly turned backwards along the external margin so as to reach the little medio-external group. Scutellum a little longer than wide with curved sides and very faint punctures. Elytra not enlarged behind, punctured like the pronotum without sutural or transparent striae, deep black, only very narrowly red-margined. There are three regular discal series of very largely separated and anteriorly effaced systematic punctures, also an exterior one more prolonged on the front margin and a little more furnished with punctures. Exterior margin provided with irregularly placed coarser punctures.

Underside black, finely pubescent on the whole surface except an unpunctured and shining oblong spot on the metasternum, just before the posterior coxae. Thighs all pubescent except on the knees, which are of the same red colour as the trochanters, tibiae and tarsi. Claws with a faintly toothed process on the base.

Helochares (s. str.) **minutissimus** (? Kuwert, 1890).

Régimbart, *Ann. Soc. Ent. Fr.* LXXII, pp. 27, 94, 339 (1903).

A single ♂ of the species taken by Dr. Kemp in small tanks at Dibrugarh, N.-E. Assam, 17–19·xi·1911 (No. 4147/19).

I have compared this beetle with a large series in my cabinet —Pondichery and Genji, viii·1901—and am not able to point out differences. This series was named by Régimbart who referred the

examples to *H. minutissimus* Kuwert. I am, however, not quite sure that he was correct in his identification for I do not detect traces of the nitid and oblong hairless spot alluded to by Kuwert on the metasternum just before the hind coxae. This character is, I believe, not a sexual one for I have examined the underside of several of my specimens and of those from the Abor collection also, both males and females; all have this part of the body densely pubescent. *H. minutissimus* Kuw was captured in Arabia or Syria and is said to have the head "piceo-nigro" and the scutellum oblong. The species known by Régimbart, widely spread over Hindustan and Indo-China, has a rather rufesceut head with a faint obscure tinge and a triangular scutellum. The prostitum and the mesosternellum show a very flat swelling in the middle, before the coxae, and the last abdominal ventral plate is provided with the usual little ciliate emargination on its posterior margin. Assuming Kuwert was right in his description, the Indian species would perhaps be undescribed. Unfortunately I cannot elucidate the question as I have not seen typical specimens, nor have I been able to compare Indian and Syrian specimens.

The ♂ is of a narrower shape than the ♀, with elytra not so strongly dilated behind the middle.

Sternolophus (Neosternolophus) tenebricosus, Blackburn.

One specimen captured by Dr. Kemp at Dosing, 1400 feet, on the Shimang River, 25·i·1912 (No. 4153/19)

Amphiops mirabilis, Sharp.

Several individuals taken at Dibrugarh, N.-E. Assam, on the 17–19·xi·1911, by Dr. Kemp are referred to this species. They were first thought to belong to *A. gibbus* Illiger, but Mr. Kolbe to whom I sent specimens for comparison with the unique type, has written me that the Dibrugarh specimens are not the same. The type of *A. mirabilis* (Ceylon), being unique also, has not been accessible; but a specimen (No. 10678) from Ceylon (typical country) sent by Mr. Kolbe seems to belong to it. And, indeed, the punctuation of the upper surface is coarser than in the cotype I have seen of *A. pedestris* Sharp, the most nearly allied species; the punctures of the interstices are as coarse as the serial ones and mixed on the sides with numerous finer and smaller punctures. This occurs also in the Dibrugarh material, in a specimen from Tonkin (Dap Can) and another from Sumatra (Palembang). The finer punctures are absent in the variety *variolosus* Régimbart (cotype in my cabinet) and most of the *mirabilis* specimens seen (India: Mandar, Konbir, Belgaum; Tonkin: Dap Can, China: Tsing tau; Java: Malang). *A. variolosus* is said to be differentiated by the very coarse punctuation of the elytra, serial and interstitial punctures being of one size, very large and deep. Nevertheless, I think *variolosus* must not be separated from *mirabilis*. The

latter has the same short form as *A. pedestris* and will perhaps in future prove to be only a variety of *A. gibbus* Illiger. A specimen from Burma (*coll. Andrewes*) of great size ($3\frac{1}{2} \times 2\frac{2}{10}$ mm.), seen by Régimbart ("*amphiops* sp. prope *mirabilis*") has been also compared by Mr. Kolbe who reports: " dem *Amphiops gibbus* sehr ähnlich." I also think it may be *gibbus*. The punctuation of the pronotum is more obsolete (perhaps because of the greater size), the interstices of the elytra very shining, on the apex without the finer punctuation of *pedestris*. I could not detect other differences. It is impossible, however, not to feel some doubt in the determination of these difficult insects and a thorough revision with access to all typical material would be desirable.

I take this opportunity of describing a form which has come to light in my study of the Dibrugarh material.

Amphiops pedestris var. varians, nov.

Type: a specimen in my cabinet, from Pondichéry, Coromandel, June, 1901 (*M Maindron*). Determined by Régimbart as *A. mirabilis*.

Differs from typical *A pedestris* in the shorter, more highly convex body, the punctuation of the sides of the elytra, the serial and interstitial punctures being nearly of one size, but less distinctly mixed together with very fine smaller punctures, the disc of the elytra round the scutellum rather more obsoletely punctured, more shining and smoother, the series of large punctures more effaced before the base, even at a distance from the scutellum. The interstice between the 1st and 2nd internal (visible) series of larger punctures is nearly as wide on the base as the sutural interstice (because of the obliteration of a series and of the interstitial punctures) and the size is generally smaller. Colour more rufescent. The variety seems to be common: there is a long series in the Brussels Museum from Mandar (Bengal) and Konbir (*R. P. Cardon*).

This is most probably the form named *pedestris* in *Ann. Soc. Ent. Fr.* 1903, p. 62, by Régimbart, who seems not to have correctly known Sharp's *A pedestris* and *mirabilis*.